



Nevada Division of Environmental Protection
Chemical Accident Prevention Program
Element Audit Checklist

Facility:	Process(es) Covered:	Date:	
IV. STANDARD OPERATING PROCEDURES (SOPs)			
A. RECORDS AUDIT/REVIEW			
1) EXISTENCE, STRUCTURE AND FORMAT OF SOPs	NAC Ref.	Resp. Code	
Do the written SOPs and SWPs satisfy CAPP requirements and do field observations indicate that procedures are being implemented pursuant to CAPP requirements? (all requirements of sections 2 through 11 must be met)	459.95416		
Notes/Comments Pertaining to Responses to Questions under Issue 1):			
2) EXISTENCE OF SOPs ADDRESSING SPECIFIC OPERATING PHASES	NAC Ref.	Resp. Code	
i. Do SOPs include steps for Initial Start-Up or Commissioning? This applies for new processes or modified processes that require unique activities for the first startup only (examples: chemical cleaning, line flushing, loop checks, process lineups unique to the initial startup).	459.95416(2a1)		
ii. Do SOPs include steps for Normal Operations (i.e. steady state operations, including monitoring and sampling requirements)?	459.95416(2a2)		
iii. Do SOPs include steps for Temporary Operations (examples: operating a system in manual control rather than automatic during maintenance or calibration activities; operating with select pieces of equipment out of service during maintenance activities)?	459.95416(2a3)		
iv. Do SOPs include steps for Emergency Shut-Downs, or ESD, (i.e. under conditions necessitating shutdown in a more rapid manner than a normal, or controlled, shutdown)?	459.95416(2a4)		
v. Does ESD procedure identify conditions under which a shutdown will occur automatically or conditions under which an ESD must be initiated manually?	459.95416(2a4)		
vi. Does ESD procedure specify assignment of shutdown responsibility to qualified operators?	459.95416(2a4)		
vii. Do SOPs include steps for Emergency Operations (examples: operation when key pieces of equipment, such as a pump, fail; operation when a critical utility, such as cooling water or instrument air, fails)?	459.95416(2a5)		
viii. Do SOPs include steps for Normal Shut-Down for a Turnaround (i.e. controlled shutdown which includes unit depressurizing, draining and isolation)?	459.95416(2a6)		
ix. If a system can be shutdown and placed in a standby mode (i.e. not drained and isolated, but capable of being restarted), does an SOP include steps for this operation?	459.95416(2a6)		
x. Do SOPs include steps for Start-Up following a Turnaround (which includes system tightness checking, purging, isolation blind removal)?	459.95416(2a7)		
xi. Do SOPs include steps for Start-Up following an ESD or after a system is put in standby mode (i.e. a warm startup, which assumes, that the process has not been drained or mechanically and electrically isolated)?	459.95416(2a7)		



Notes/Comments Pertaining to Responses to Questions under Issue 2):		
3) INCLUSION OF OPERATING LIMITS IN SOPs	NAC Ref.	Resp. Code
i. Do SOPs include Operating Limits?	459.95416(2b)	
ii. Do SOPs include Consequences of Deviations from the Operating Limits?	459.95416(2b1)	
iii. Do SOPs include the steps or actions required to correct or avoid Deviations from Operating Limits?	459.95416(2b2)	
Notes/Comments Pertaining to Responses to Questions under Issue 3):		
4) INCLUSION OF SAFETY & HEALTH (S & H) CONSIDERATIONS	NAC Ref.	Resp. Code
i. Does S&H data include properties of, and hazards presented by, chemicals used in process?	459.95416(2c1)	
ii. Does S&H data include precautions, such as Engineering Controls, Administrative Controls, and personal protective equipment (PPE) necessary to prevent exposure?	459.95416(2c2)	
iii. Does S&H data include control measures to be taken if physical contact or airborne exposure occurs?	459.95416(2c3)	
iv. Does S&H data include quality control for raw materials and control of hazardous chemical inventory levels?	459.95416(2c4) 459.95416(2c5)	
v. Does S&H data include any special or unique hazards?	459.95416(2c6)	
Notes/Comments Pertaining to Responses to Questions under Issue 4):		
5) INCLUSION OF SAFETY SYSTEMS AND THEIR FUNCTIONS IN THE SOPs	NAC Ref.	Resp. Code
i. Is Safety System Description, SSD, included as a specific SOP, or as an addendum, in SOP manual, and does it include applicable portions of items 1 through 11 below?	459.95416(2d)	
1. If process is covered by an Emergency Shut-Down System, is it discussed in the SSD?	459.95416(2d)	
2. If the process area has Toxic Gas Sensors, are they discussed in the SSD?	459.95416(2d)	
3. If the process area has Combustible Gas Sensors, are they discussed in the SSD?	459.95416(2d)	



4. If the process area has Flame Detectors, are they discussed in the SSD?	459.95416(2d)	
5. If the process has a Firewater System, is it discussed in the SSD?	459.95416(2d)	
6. If the process has an Emergency Generator, is it discussed in the SSD?	459.95416(2d)	
7. If the process has an Uninterruptible Power Supply (UPS), is it discussed in the SSD?	459.95416(2d)	
8. If the process has a Flare System, Incinerator or Vent Scrubber, is it discussed in the SSD?	459.95416(2d)	
9. If there are audible or visual Alarms, are they discussed in the SSD?	459.95416(2d)	
10. If the process has an associated building Ventilation System, is it discussed in the SSD?	459.95416(2d)	
11. If there other safety systems, are they discussed in the SSD (list below)?	459.95416(2d)	
ii. Does SSD appear to be complete based on review of Process (Block) Flow Diagram, P&ID, and site inspection?	459.95416(2d)	
Notes/Comments Pertaining to Responses to Questions under Issue 5):		
6) CONSISTENCY WITH PSI and PROCEDURE CLARITY	NAC Ref.	Resp. Code
i. Do the SOPs appear to cover operation of the equipment and instruments defined in PSI?	459.95416(1a)	
ii. Do written SOPs appear to provide clear instructions in a language understood by all operating personnel?	459.95416(1b)	
Notes/Comments Pertaining to Responses to Questions under Issue 6):		
7) PROCESS OPERATOR ACCESSIBILITY TO SOPs	NAC Ref.	Resp. Code
i. Do SOPs, whether hard copy or on-line, appear to be readily accessible by personnel who work in or maintain a process? (Refer to Part B-1)	459.95416(3a)	
Notes/Comments Pertaining to Responses to Questions under Issue 7):		



8) REVIEW OF SOPs TO VERIFY THAT THEY REMAIN CURRENT AND ACCURATE	NAC Ref.	Resp. Code
i. Are SOPs being reviewed as often as necessary to assure that they reflect current operating practice? (Refer to Part B-2)	459.95416(3b)	
ii. Does facility staff certify annually that (Master or Original) SOPs are current and accurate, and does it have a criteria for this determination such as: - annual procedure review by operators or engineers, or - effective MOC procedures that ensure procedural updates? (Refer to Part B-2)	459.95416(3c)	
iii. Does facility staff annually verify that SOP copies used by operations & maintenance personnel are consistent with the most current procedure? (Refer to Part B-2)	459.95416(3c)	
Notes/Comments Pertaining to Responses to Questions under Issue 8):		
9) EXISTENCE OF SAFE WORK PRACTICES	NAC Ref.	Resp. Code
i. Has a Hot Work procedure with permit system been developed that requires: compliance with 29CFR1910.252(a), permit authorization prior to conducting hot work activity, and indication of object upon which hot work is to be performed and the date of the hot work?	459.95433	
ii. Has a Lock-Out/Tag-Out procedure with permit system been developed which contains the elements of 29CFR1910.147?	459.95416(3d1)	
iii. Has a Confined Space Entry procedure with permit system been developed which contains the elements of 29CFR1910.146?	459.95416(3d2)	
iv. Has a Process Equipment Opening and Line Breaking procedure with permit system been developed?	459.95416(3d3)	
v. Has a procedure for Controlled Access into a facility by maintenance, contractor, laboratory or other support personnel been developed?	459.95416(3d4)	
vi. If other Safe Work Practices have been defined, has the procedure been developed?	459.95416(3d5)	
Notes/Comments Pertaining to Responses to Questions under Issue 9):		
10) IMPLEMENTATION OF SOPs and SWPs	NAC Ref.	Resp. Code
i. Do SOPs and SWPs appear to be in use in the plant? (Refer to Part B-1)	459.95416(1)	
Notes/Comments Pertaining to Responses to Questions under Issue 10):		

11) IMPLEMENTATION PLAN AND DOCUMENT CONTROL		NAC Ref.	Resp. Code
i.	Is there a site-specific plan that addresses how the SOP requirements will be developed and maintained?	459.95516(2)	
ii.	Is there a site-specific policy or procedure that addresses how SOP documentation is controlled to ensure that the most current information is in circulation and use?	459.95516(2)	
Notes/Comments Pertaining to Responses to Questions under Issue 11):			
General Records Audit/Review Notes/Comments:			



B. ON-SITE INSPECTION					
1) SELECT 1 OR 2 INDIVIDUAL SOPs and 1 OR 2 INDIVIDUAL SWPs TO VERIFY IMPLEMENTATION LIST ON THE FOLLOWING TABLE:					
#	SOP or SWP ID #	Title - Purpose/Description Summary			
i					
ii					
iii					
iv					
Inquiry/Observation		Resp. Code :			
		i	ii	iii	iv
a. Does observation of actual practice indicate that written SOP or SWP is available and being followed (look for use of operating procedures along with checklists, monitoring forms and sample logs or completed SWP permit forms)?					
b. Is PPE identified in SOP or SWP in use or otherwise readily available?					
c. Is the SOP or SWP of the most recent revision?					
<i>'d' through 'g' are related to SOPs only:</i>					
d. Do equipment label or descriptions match the SOPs?					
e. Do actual Engineering Controls appear to match those identified in SOP?					
f. Do actual Administrative Controls appear to match those identified in SOP?					
g. Are alarm settings or safe operating limits that are noted in the SOPs consistent with those settings or limits posted on the unit, displayed on the DCS system or noted elsewhere on the unit?					
Notes/Comments Pertaining to Responses to Questions under Issue 1):					
2) VERIFY THAT SOPs ARE CURRENT					Resp. Code
a. Are SOPs being reviewed as often as necessary to assure that they reflect current operating practice? (Look for evidence of active MOC system.)					
b. Is there a system in use to ensure that the procedures are certified to be accurate on an annual basis? (Look for evidence of an active MOC system or for evidence of annual procedure review.)					
c. Are procedures that are in use in the plant by operations and mechanical personnel of the most recent revision?					



Notes/Comments Pertaining to Responses to Questions under Issue 2):

General On-Site Inspection Notes/Comments:



C. INTERVIEWS	
1) SELECT TWO OR MORE OPERATING PERSONNEL TO INTERVIEW REGARDING THE EFFECTIVENESS OF SOP'S USING THE FOLLOWING QUESTION SETS. (RESPONSES ARE TO BE LOGGED ON FOLLOWING PAGES.)	
Question Set	Question Options/Phrasing
a	What is your job description and associated tasks?
b	How do you access the SOPs?
c	How often do you use the SOPs? Are checklists or log sheets used? If so, to what extent and for what procedures? How useful are the SOPs for day to day reference?
d	Do the SOPs include terms or language which is too technical or confusing to you? Do the SOPs accurately reflect how the process steps are performed?
e	Are you involved in developing or reviewing the SOPs?
f	Are Safe Work Practices, such as Hot Work permits, Lock-Out/Tag-Out permits, Confined Space Entry permits, Linebreaking permits and/or Controlled Access, in place and being followed? Are you involved in implementing these procedures? If so, how are you involved? Are the Safe Work practices proving to be effective? Do other such Safe Work practices and policies appear to be needed?



C. INTERVIEWS			
2) RECORD RESPONSES OF SELECTED OPERATING OR MAINTENANCE PERSONNEL TO QUESTIONS FROM THE QUESTION SETS (LISTED ON THE FIRST PAGE OF SECTION C)			
Employee Profile			
Job Title/Position	Department/Unit/Group	Yrs in Job	Yrs w/Co.
Response to Question Set _:			
Response to Question Set _:			
Response to Question Set _:			



Response to Question Set _:

Response to Question Set _:

Response to Question Set _:

Response to Question Set _: